Assignment 2: K- Nearest Neighbours

Course Instructor: Dr. Wajahat Hussain

Prepared By: Muhammad Saifullah & Abdul Rehman Qureshi

Email: msaifullah.msee18seecs@seecs.edu.pk

The dataset consists of 50 32x32 color images of actors in 10 classes, with 5 images per class.

Data -- a 50x3072 array of uint8s. Each row of the array stores a 32x32 colour image. The first 1024 entries contain the red channel values, the next 1024 are green, and the final 1024 are blue. The image is stored in row-major order, so that the first 32 entries of the array are the red channel values of the first row of the image.

labels -- a list of 50 names. The names at index *i* indicates the label of the *i*th image in the array **data**

Here are the 20 random images shown:

You want to check that which actor or actress you resemble. It is easier than you thought. Following are the steps that might help you to build your matlab code.

The code for reading dataset and showing some sample image is given in KNN.ipynb file. You have to give your image as an input and perform k-nearest neighbour (k=1,3,5) using the Euclidian

distance. Then Show that which actor do you resemble for each value of k. You can use majority voting scheme for k=3 and for k=5.

Note: First upload your dataset file and your image you want to compare on google drive and provide its path in the code.